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SUSAN GERARD, DIRECTOR

FAX TRANSMITTAL SHEET

DATE: July 7, 2005

TO: Laboratory Director and QA Manager

FROM: Steven D. Baker, Office Chief
Lab Licensure, Certification and Training
State Laboratory Services

Subject: Information Update #87

PAGES: 7 (including cover)

NOTE: If any of the pages are missing, please call 1-800-952-0374, (602) 364-0734 or (602) 364-0733.

THIS MESSAGE AVAILABLE IN ALTERNATIVE FORMAT UPON REQUEST, BY CONTACTING: Prabha Acharya AT (602) 364-0734.

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Information Update

July 7, 2005
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1. **ADHS Director Approvals:**

   A. The approval of "Alternate Default Limits for the QC Parameters for which Acceptance Limits are not Specified in the Referenced Methods" was signed by the Director on 6/29/2005. As an alternative to developing statistically derived limits, ADHS proposes the use of default limits that the laboratories could adopt for any applicable method without sacrificing the quality of the data generated. The Arizona licensed laboratories may begin to use these default limits for Arizona compliance samples. Please see the attached partial document (2 out of 5 pages) for details. The complete document can be found at the following ADHS website:
   http://www.azdhs.gov/lab/license/tech/controllimits_.pdf

   If you have any questions on the above item, please contact either Prabha Acharya or Barbara Escobar at (602) 364-0720.

   B. The approval of 10 additional parameters (acetophenone, alpha-terpineol, aniline, carbazole, o-cresol, n-decane, 2,3-dichloroaniline, n-octadecane, pyridine, p-cresol) to be analyzed by EPA Method 625 for Centralized Waste Treatment was signed on 6/23/05. The laboratories with method 625 on their license may begin reporting the added compounds from the approval date without a flag; there is no need to request the additional analytes to be added to their 625 license.

2. In an effort to standardize the reporting of HAA5 and TTHMs, ADEQ has developed a new reporting protocol for those analytes. Please see the attached ADEQ memo dated 06/08/2005, for details.

3. **REMINDER:**

A.R.S. 36-495.03(F) "A regular license expires one year after the date of issuance and shall be renewed on submission of a renewal application and payment of the renewal application fee prescribed in 36-495.06, at least thirty days before expiration of the license, unless the director determines pursuant to 36-495.09 that grounds exist to deny the application."

A.A.C. R9-14-604 Regular License Renewal Process
In-state applications must be received 30 days prior to license expiration date and out-of-state applications must be received 60 days prior to license expiration date.

An application is not complete without payment of the appropriate application fee or fees and payment of the amount billed under A.A.C. R9-14-608(C).

4. **CLARIFICATION:**

The following are examples of chemical parameters that do not require an MDL Study since matrix spikes are not performed on the samples:

pH, Temperature, Conductivity, All residue (solids) analyses, Color, Odor, Turbidity, BOD, COD, Paint Filter, Corrosivity, Ignitability, Reactivity, Moisture Content.

Other chemical parameters that do not require MDL studies, for other reasons:

8015AZ (an RLV study is required instead)
Metals in Soil (per ADHS Director Approved Method Modifications)

5. **Chris Varga from ADEQ AZPDES permit section has confirmed that they are accepting E.Coli results as either CFU or MPN. They see the two units as equivalent.**

6. **A clarification from EPA-Cincinnati: While Method 524.2 does not address background subtraction in relation to BFB, it has always been our intention that appropriate background subtraction should be performed. An example of appropriate subtraction would be one scan immediately prior to and one scan immediately after the BFB chromatographic peak."**

7. **Please note that the 5th Edition of the EPA Manual for the Certification of Laboratories Analyzing Drinking Water, has been approved by EPA, "http://www.epa.gov/safewater/labcert/labindex.html" ADHS Rules still specify the 4th Edition of the EPA Manual, however laboratories should consider including the following items in their**

current operation, since ADHS will adopt the 5th edition in the next rule revision:

A. Chapter IV, Section 7.2.11. "Sample preparation and analyses for the MDL calculation should be made over a period of at least three days to include day-to-day variation as an additional source of error."

B. Chapter IV, Section 7.2.12. "Laboratories should run a LFB at their MRL every analysis day and should not report contaminants at levels less than the level at which they routinely analyze their lowest standard."

C. Chapter V, Section 3.1.5. "Record pH meter slope monthly, after calibration." See Section 3.1.5.1 and 3.1.5.2 for more details.

8. Methods' Update from EPA:

Freon, regardless of source or date manufactured, cannot be used for the uses specified at 40 CFR 82.13, appendix G, including determination of oil and grease, and TPH, in wastewater. In the April 6, 2004 method update, EPA proposed to withdraw Freon-based methods. That rule is scheduled to go final some time this summer. After the rule is published, there will be no approved Freon-based methods at part 136.

The laboratories must switch over to 1664A from the Freon based methods.

9. The next ELAC meeting has been rescheduled for Wednesday, 9/21/2005, due to non-availability of the meeting room on 9/22/2005. It was previously scheduled for 9/22/2005. Please make a note of the new meeting date.

10. Please contact Joe Harmon at (602) 364-0673 or harmonj@azdhs.gov. for workshop related questions. Website: http://www.azdhs.gov/lab/license/training/index.htm and contact Prabha Acharya @ (602) 364-0734 or acharyp@azdhs.gov for technical questions. Website: http://www.azdhs.gov/lab/license/tech/infoup.htm.

From: Julie Hoskin – QA/QC Unit Supervisor
Subject Standard for Reporting HAA5s and TTHMs
:

Haloacetic Acids and Trihalomethanes are disinfection byproducts that are required for the testing of Drinking Water. Both of these tests have individual analyte components that are analyzed and totaled. HAA5 is the sum of mass concentration of five haloacetic acid species and TTHMs are the sum of the four trihalomethanes: chloroform, bromodichloromethane, dibromochloromethane, and bromoform.

In an effort to standardize the reporting of HAA5 and TTHMs, ADEQ requests that in instances when all of the individual components are reported as Non-Detect (ND) or <Method Reporting Limit (MRL) that the sum be reported as < highest MRL of the individual components.

Example:

Chloroform	**<1.0**
Bromodichloromethane	**<0.50**
Dibromochloromethane	**<0.50**
Bromoform	**<0.50**
Total Trihalomethanes (TTHMs)	**<1.0**

Also, if there is a detection for any of the individual components, that result should be reflected in the total, even if the result is < the highest MRL of the individual components.

Example:

Monochloracetic Acid	**<0.50**
Dichloroacetic Acid	**<0.50**
Trichloroacetic Acid	**0.66**
Monobromoacetic Acid	**<1.0**
Dibromoacetic Acid	**<0.50**
HAA5	**0.66**

For questions, please contact Julie Hoskin at (602) 771-4866 or John Calkins at (602) 771-4617.

ADHS APPROVED ALTERNATE DEFAULT LIMITS
FOR THE QC PARAMETERS FOR WHICH ACCEPTANCE LIMITS ARE NOT SPECIFIED IN THE REFERENCED METHODS

Per ADHS Rules A.A.C. R9-14-615.C.8, ***laboratories must statistically develop limits from historical data, if the laboratory tests for a parameter for which quality control acceptance criteria are not specified in the method or by EPA or ADEQ, by:***

a. Determining the mean and standard deviation for a minimum of 20 data points, excluding statistical outliers, and

b. Setting the limits no more than 3 standard deviations from the mean and in the detectable range.*

ADHS understands the extent of time and labor involved in the development of QC acceptance criteria and to update them at a specified frequency. The statistically derived limits have other problems in that if a laboratory's precision is very tight, it leads to impractical limits; on the other hand, poor precision leads to an excessively wide range.

As an alternative to developing statistically derived limits, ADHS proposes the use of default limits that the laboratories could adopt for any applicable method without sacrificing the quality of the data generated. The laboratories have an option of selecting either of the two processes for individual method/compounds and the one they select must be specified in their SOPs. The default limits proposed are derived from the individual reference methods from another QC parameter's acceptance limits, which represent similar or narrower limits.

For laboratories not choosing to use historical limits, the following default limits (or narrower) could be used for any method, where applicable:

QC NOT SPECIFIED IN METHOD →	DEFAULT QC (METHOD SPECIFIED OR LABORATORY HISTORICAL IF NOT SPECIFIED)
MS/LFM (processed or non-processed)	LCS/LFB
LCS/LFB (processed or non-processed)/ Second Source reference standard	CCV/continuing IPC
PQL/MRL (non-processed)	CCV/continuing IPC
PQL/MRL (processed)	LCS/LFB
QCS (non-processed)	ICV/continuing IPC/manufacturer's limits
QCS (processed)	LCS/LFB/ manufacturer's limits
IDC limits	LFB/LCS
LFB/LCS/LFM/duplicate RPD	IDC limits/20%
Non-CCC compounds	CCC limits
ICV/CCV	10%

For 8000 methods that do not specify the QC limits for MS/LCS, the default limit of ±30% (8000B) could be used.

For 500, 600, 1600 and 8000 series methods that do not specify surrogates and or acceptance limits for surrogates, the default limits of 70-130% could be used.

Most methods do not list a precision measurement; the industry standard has always been 20% RPD (For example, See SM 20th ed. 1020B, Sections 1 and 3, Draft 7000B, Section 9.4).

* **The lower end of the detectable range should be at a minimum the PQL or the lowest standard value represented in the initial calibration. This should be explained in the lab's SOP.**

6/16/2005